CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.11/RN/CEMENT/2012-13

Date: 14.01.2013

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. R. Nataraj**, Contractor, Bangalore.
NAME OF THE WORK	:	Improvements to Kalathur Layout Cross roads in Ward No. 11, Kuvempunagara, BBMP, Bangalore.
REFERENCE	:	EE/BTP/BBMP/E-TND/193/2011-12 Dated: 02.11.2011
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	160 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	475 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	28.00 %	-

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Job No.: CTCE/BBMP/W.No.11/RN/SAND/2014-15 : 14.01.2013

TEST REPORT ON FINE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. R. Nataraj,** Contractor, Bangalore.

Name of Work : Improvements to Kalathur Layout Cross roads in Ward No. 11, Kuvempunagara, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-TND/193/2011-12 Dated: 02.11.2011

Date of Testing : 14.01.2013

Material : Fine Aggregates Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	67	3.35	3.35	96.7	90-100
2.36	232	11.60	14.95	85.1	75-100
1.18	412	20.60	35.55	64.5	55-90
600 Micron	524	26.20	61.75	38.3	35-59
300 Micron	498	24.90	86.65	13.4	8-30
150 Micron	186	9.30	95.95	4.1	0-10

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372
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Job No.: CTCE/BBMP/W.No.11/RN/AGG/2014-15 : 14.01.2013

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. R. Nataraj,** Contractor, Bangalore.

Name of Work : Improvements to Kalathur Layout Cross roads in Ward No. 11, Kuvempunagara, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-TND/193/2011-12 Dated: 02.11.2011

Date of Testing : 14.01.2013

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25100**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	969	3.86	3.86	96.14	95-100
20	16235	64.68	68.54	31.46	30-70
10	4982	19.85	88.39	11.61	10-35
4.75	2374	9.46	97.85	2.15	0-5

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Pg 1 of 3

AE-4

372 23/1/13

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Job No.: CTCE/BBMP/W.No.11/RN/STEEL/2012-13

14.01.2013

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. R. Nataraj**, Contractor, Bangalore.
Name of the Work	:	Improvements to Kalathur Layout Cross roads in Ward No. 11, Kuvempunagara, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-TND/193/2011-12 Dated: 02.11.2011
Date of Test	:	14.01.2013
Technical Reference	:	IS: 1786-2008

G.M.MUNIYAPPA,
B.E.(ELECT),B.E. (CIVIL)
EXECUTIVE ENGINEER(RTD)
PUBLIC WORKS DEPARTMENT

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	517	560	13.45	O.K	O.K

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Job No.: CTCE/BBMP/W.No.11/RN/CUBE/2014-15

23.01.2013

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. R. Nataraj,** Contractor, Bangalore.
Name of the work	: Improvements to Kalathur Layout Cross roads in Ward No. 11, Kuvempunagara, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/E-TND/193/2011-12 Dated: 02.11.2011
Sample ID	: Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 7^{th} day

Verified

G.M.MUNIYAPPA,
B.E.(ELECT),B.E. (CIVIL)
EXECUTIVE ENGINEER(RTD)
PUBLIC WORKS DEPARTMENT

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.01.2013	23.01.2013	8.089	342.6	15.23
2	16.01.2013	23.01.2013	8.157	358.9	15.95
3	16.01.2013	23.01.2013	8.236	373.4	16.60

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377
29/1/13

25/1/13
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Job No.: CTCE/BBMP/RN/WMM/Gradation/2013-14

22.01.2013

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. R. Nataraj,** Contractor, Bangalore.

Name of Work : Improvements to Kalathur Layout cross road Syndicate Bank to Velangani Main road BBMP, Bangalore.

Reference : AEE/VP/(WO)/193/2012-13 Dated: 21.01.2013

Date of Testing : 22.01.2013

Material : WMM

Sample Location : WMM Mix Plant

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B.E.(ELECT),B.E. (CIVIL)
EXECUTIVE ENGINEER(RTD)
PUBLIC WORKS DEPARTMENT

Oven Dry Wt (gm): **26000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	995	995	3.8	96.2	95-100
22.4	5575	6570	25.3	74.7	60-80
11.2	5740	12310	47.3	52.7	40-60
4.75	4495	16805	64.6	35.4	25-40
2.36	3980	20785	79.9	20.1	15-30
0.600	2295	23080	88.8	11.2	8-22
0.075	2635	25715	98.9	1.1	0-8

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372
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Job No.: CTCE/BBMP/RN/SDBC/Bitumen/2013-14 24.01.2013

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AASHTO T 164 & AASHTO T 30

CLIENT	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP,
AGENCY	**Mr. R. Nataraj,** Contractor, Bangalore.
NAME OF THE WORK	Improvements to Kalathur Layout cross road Syndicate Bank to Velangani Main road, BBMP, Bangalore.
REFERENCE	AEE/VP/(WO)/193/2012-13 Dated: 21.01.2013
SAMPLE I/D	Roads in Syndicate Bank to Velangani Main road, BBMP, Bangalore.
DATE OF TESTING	24.01.2013

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	475
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26	25.00
7. Bitumen content in %	5.20	5.00
8. Average	5.10	

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GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	36.32	7.66	7.66	92.34	90-100
4.75	260.3	54.92	62.58	37.42	35-51
2.36	57.41	12.11	74.69	25.31	24-39
1.18	41.53	8.76	83.45	16.55	15-30
0.3	26.56	5.60	89.05	10.95	9-19
0.075	27.86	5.88	94.93	5.07	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	28.56	5.71	5.71	94.29	90-100
4.75	251.6	50.32	56.03	43.97	35-51
2.36	92.56	18.51	74.54	25.46	24-39
1.18	42.35	8.47	83.01	16.99	15-30
0.3	30.58	6.12	89.13	10.87	9-19
0.075	22.52	4.50	93.63	6.37	3-8

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